

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A communications acquisition method, which comprises:

correlating a binary-coded spread sequence arriving at a frequency  $f$  and having  $m$  bits with a locally generated spread sequence having  $m$  bits, the locally generated spread sequence having  $k$  sections, the correlation comprising the following steps:

~~by phase shifting a multiplicity of locally generated spread sequences with respect to the received spread sequence, correlating the received spread sequence with a locally generated spread sequence at the frequency  $f$ ,~~

storing the received spread sequence,

~~and processing the stored, received spread sequence at an oversampling rate of  $i^*$ , where  $i$  is an integer, and~~

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splitting the stored $[\cdot,\cdot]$  received spread sequence into  
 $k \pm$  sections, and

~~carrying out the correlation in i steps~~

correlating the sections of the stored received spread  
sequence at a frequency  $k^*f$  with corresponding sections  
of the locally generated spread sequence.

*ADT*  
Claim 2 (currently amended): The method according to claim 1, which further comprises:

~~shifting the received spread sequence bit by bit within k~~  
~~cycles in k section variants each having m bits at an~~  
~~oversampling rate of  $k^*f$ , where k is an integer, by shifting~~

upon correlating each section of the stored received spread  
sequence, shifting the bits of the respective section by one  
bit to replace the least significant bit of a first section  
variant by a succeeding bit of the received spread sequence  
and to shift a most significant bit of a section variant to a  
position of a least significant bit of a succeeding section  
variant;

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~~after k cycles, replacing the least significant bit by a succeeding bit of the received spread sequence and repeating the shifting and replacing steps (m-1) times, subdividing the locally generated spread sequence into k sections each having n bits, where n is an integer, and comparing each of these sections with a section variant of the received spread sequence within a cycle; counting all matches and storing the count results~~

summing the correlation results obtained per section correlation step over k section correlation steps to obtain a count result;

repeating the shifting step m-1 times for obtaining m-1 further count results; and

carrying out a maximum search over all the m count results.

Claim 3 (original): The method according to claim 2, wherein a number of sections of prescribed length is k=32 and a chip length of the sections is n=32.

Claim 4 (currently amended): A correlator for performing a communications acquisition, comprising:

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a FIFO memory having a memory input and a memory output, said FIFO memory inputting and outputting content;

*AC*

a shift register with feedback for holding a received signal sequence in serial form, said shift register being clocked at an oversampling rate and having register positions connected in parallel to said memory input for parallel storage of a plurality of shift register contents read out in succession, said memory output being connected in parallel with said register positions for parallel transfer of data to said shift register;

a further memory for holding reference signal sequences; and

a comparator for comparing the content of said FIFO memory with a content of said further memory at said oversampling rate;

the correlator programmed to perform the step of:

correlating a binary-coded spread sequence arriving at a frequency f and having m bits with a locally generated spread sequence by phase-shifting a multiplicity of locally generated spread sequences with respect to the received spread sequence, correlating the received

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~~spread sequence with a locally generated spread sequence at said frequency f,~~

storing the received spread sequence;

splitting the stored received spread sequence into k sections; and

correlating the sections of processing the stored[[],] received spread sequence at a frequency of  $k \cdot f$  with corresponding sections of the locally generated spread sequence said oversampling rate equal to  $i \cdot f$ , where  $i$  is an integer, and splitting the stored, received spread sequence into i sections and carrying out the correlation in i steps.

Claim 5 (original): The correlator according to claim 4, wherein said comparator has a comparator output, and including an adder comprising two-bit adders configured to form a cascaded interconnection, each of said two-bit adders having at least two inputs and an output, said output of each of said two-bit adders connected to one of said at least two inputs of a succeeding one of said two-bit adders, said adder connected to said comparator output and configured to add up logic values produced during bit-by-bit comparison for matching bit positions.